Confirmation No. 3592

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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| Applicants: | Wollenberg et al. | Examiner: M. Wallenhorst |
| Serial No.: | 10/699,510 | Group: Art Unit 1743 |
| Filing Date: | October 31, 2003 | Docket: T-6298A (538-60) |
| For: | HIGH THROUGHPUT SCREENING METHODS FOR LUBRICATING OIL COMPOSITIONS | Dated: May 25, 2007 |

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**REQUEST FOR REHEARING UNDER 37 C.F.R. §41.52**

M. CARMEN & ASSOCIATES, PLLC
170 Old Country Road – Suite 400
Mineola, NY 11501
Phone: (516) 992-1848
Facsimile: (516) 739-0981
MEC:bg

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Sir:

In response to the decision rendered by the Board of Patent Appeals and Interferences ("Board") mailed March 28, 2007, Appellants respectfully request a rehearing of the decision affirming the rejection under 35 U.S.C. §103 (a) of appealed Claims 1-4 and 6-22 as obvious over Kolosov et al. and appealed Claims 5 and 23-37 as obvious over Kolosov et al. in view of Shtein et al. The following comments are respectfully submitted in order to address the points believed to be misapprehended or overlooked by the Board.

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postpaid in an envelope, addressed to the: Commissioner for Patents, Alexandria, VA 22313-1450, Mail Stop Appeal Brief-Patents on May 25, 2007.

Dated: May 25, 2007

Bridget Griffin

A. Appealed Claims 1-4 and 6-22
are non-obvious over Kolosov et al.

First, with respect to the following statements regarding appealed Claims 1-4 and 6-22 as obvious over Kolosov et al. in the bridging paragraph of pages 9 and 10 of the Board's decision:

> "In response, the examiner finds that an additive, by definition, means any substance incorporated into base material, usually in low concentration, to perform a specific function, i.e., a stabilizer, preservative, dispersing agent, antioxidant, etc. For support, the examiner points to a definition of "additive" in The Condensed Chemical Dictionary, 20 (10th ed. 1981). See answer, p.9. The appellants do not challenge this finding in the reply brief.
>
> .... We further find that one of ordinary skill in the art would have expected the lubricant compositions, comprising a lubricant and an additive, to have a major amount of a base oil and minor amount of an additive. Therefore, it is reasonable to conclude that the claimed lubricant compositions would have been obvious to one of ordinary skill in the art in view of the teachings in Kolosov."

Appellants respectfully believe that the following argument was overlooked. Contrary to the statement that a lubricant composition would be expected to have a major amount of a base lubricant oil and a minor amount of an additive, Appellants clearly rebutted this argument on page 9 of the Appeal Brief in which it is stated an additive does *not* have to be incorporated into a base material in a low concentration. Specifically, Appellants have continuously asserted that a lubricating oil composition can be a concentrate that contains *a major amount of a lubricating oil additive* and *a minor amount of base oil of lubricating viscosity* as a diluent for the concentrate, e.g., see Mortier et al., Chemistry and Technology of Lubricants, 2nd Edition, Blackie Academic & Professional, page 88 (1997), a copy of which is attached, which shows that an additive such as an ashless dispersant can be present in a lubricating oil composition concentrate in an amount of 60% together with a base oil.

As such, it cannot possibly be inherent as proposed by the Examiner that in a lubricant composition having an additive therein that the base lubricant oil is present in a major amount while the additive is present in a lesser minor amount (See page 9 of the Final Office Action, page 2 of the Advisory Action and page 9 of the Examiner's Answer). Besides, it is well

established that the concept of inherency has no place in determinations of obviousness under 35 U.S.C. §103, as opposed to anticipation under 35 U.S.C. §102, because, as stated in *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984), "it confuses anticipation by inherency, i.e., lack of novelty, with obviousness, which, though anticipation is the epitome of obviousness, are separate and distinct concepts." See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775-76 (Fed. Cir. 1983). Appellants have readily shown that a lubricating oil composition can be a concentrate that contains a major amount of a lubricating oil additive and a minor amount of base oil of lubricating viscosity as a diluent for the concentrate. Moreover, a lubricant can be a grease, jelly, e.g., K-Y jelly or petroleum jelly, as well as powders, e.g., dry graphite, PTFE, etc., formulated with water. Accordingly, Appellants submit that a lubricating oil composition would not be expected by one of ordinary skill in the art to contain a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive. As such, Appellants have clearly shown that the Examiner erred in concluding that that claimed lubricant oil compositions would have been obvious in view of the teachings in Kolosov et al. For the foregoing reasons, Appellants respectfully submit that appealed Claims 1-4 and 6-22 are not obvious over Kolosov et al. Thus, appealed Claims 1-4 and 6-22 are allowable.

B. Appealed Claim 5 is non-obvious over Kolosov et al. in view of Shtein et al.

With respect to the rejection of appealed Claim 5 as obvious over Kolosov et al. in view of Shtein et al., Appellants respectfully believe that the following arguments were overlooked.

In contrast to the presently claimed invention, Kolosov et al. fail to teach of a method for preparing a plurality of lubricant oil formulations, under program control, which comprises, *inter alia*, "(a) providing a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive for combination to formulate a lubricating oil composition .... (c) combining, under program control, the major amount of the at least one base oil of lubricating viscosity and the minor amount of the at least one lubricating oil additive in varying percentage compositions to provide a plurality of different lubricating oil composition samples" as generally recited in appealed Claim 1 from which Claim 5 depends. Shtein et al. do

not cure and is not cited as curing the deficiencies of Kolosov et al. Rather Shtein et al. is cited for its disclosure of a dispensing means and not at all to the recited steps of "providing a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive for combination to formulate a lubricating oil composition .... combining, under program control, the major amount of the at least one base oil of lubricating viscosity and the minor amount of the at least one lubricating oil additive in varying percentage compositions to provide a plurality of different lubricating oil composition samples" as generally recited in appealed Claim 1 from which Claim 5 depends. Shtein et al. provide no suggestion or motivation to formulate a lubricating oil composition comprising a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive. In contrast, Shtein et al. simply disclose depositing an organic material onto a semiconductor device by way of a carrier gas. Thus, even by combining Shtein et al. with Kolosov et al., one skilled in the art would not arrive at the presently claimed method. As such, Appellants have clearly shown that the Examiner erred in concluding that that claimed method employing the recited lubricant oil compositions would have been obvious in view of the teachings in Kolosov et al and Shtein et al.

In addition, it is the Examiner's apparent belief that the reference to Shtein et al. should not be relied upon for its teaching of what it deposits on a substrate, but rather, should be relied upon for its teaching of the structure of a dispenser that serves to pre-mix reagents together therein before dispensing them onto a substrate. However, it is well established that there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. The disclosure of Shtein et al. would necessarily have to be able to mix and deposit a liquid such as the recited lubricating oil composition into a receptacle in order for one skilled in the art to rely upon Shtein et al. However, Shtein et al. disclose that an organic vapor jet printing (OVJP) is used for the direct patterning during growth of molecular organic semiconductor thin films. In fact, Shtein et al. further disclose that the OVJP does not use liquid solvents (see paragraph 25 in Shtein et al.). Kolosov et al. disclose that the lubricants may be dispensed using a *suitable* dispensing apparatus. Accordingly, one skilled in the art would not look to Shtein et al. which disclose that the OVJP does not use liquid solvents to modify the

apparatus of Kolosov et al. and arrive at the presently claimed method for preparing a plurality of lubricant oil formulations, under program control. As such, Appellants have further clearly shown that the Examiner erred in concluding that that claimed method employing the recited lubricant oil compositions would have been obvious in view of the teachings in Kolosov et al and Shtein et al.

For the foregoing reasons, Appellants respectfully submit that appealed Claim 5 is not obvious over Kolosov et al. and Shtein et al. Thus, appealed Claim 5 is allowable.

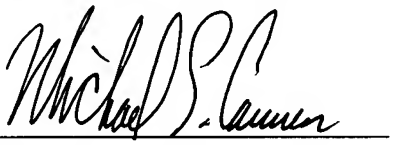
C. Appealed Claims 23-37 are non-obvious over Kolosov et al. in view Shtein et al.

With respect to the rejection of appealed Claims 23-37 as obvious over Kolosov et al. in view Shtein et al., Appellants respectfully believe that the following argument was overlooked.

It is the Examiner's apparent belief that the reference to Shtein et al. should not be relied upon for its teaching of what it deposits on a substrate, but rather, should be relied upon for its teaching of the structure of a dispenser that serves to pre-mix reagents together therein before dispensing them onto a substrate. However, it is well established that there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. The disclosure of Shtein et al. would necessarily have to be able to mix and deposit a liquid such as the recited lubricating oil composition into a receptacle in order for one skilled in the art to rely upon Shtein et al. However, Shtein et al. disclose that an organic vapor jet printing (OVJP) is used for the direct patterning during growth of molecular organic semiconductor thin films. In fact, Shtein et al. further disclose that the OVJP does not use liquid solvents (see paragraph 25 in Shtein et al.). Kolosov et al. disclose that the lubricants may be dispensed using a *suitable* dispensing apparatus. Accordingly, one skilled in the art would not look to Shtein et al. which disclose that the OVJP does not use liquid solvents to modify the apparatus of Kolosov et al. and arrive at the presently claimed system for preparing a plurality of lubricant oil formulations, under program control. As such, Appellants have clearly shown that the Examiner erred in concluding that that claimed system would have been obvious in view of the teachings in Kolosov et al and Shtein et al.

For the foregoing reasons, Appellants respectfully submit that appealed Claims 23-37 are not obvious over Kolosov et al. and Shtein et al. Thus, appealed Claims 23-37 are allowable.

Dated: May 25, 2007

By: 

Michael E. Carmen
Reg. No. 43,533
Attorney for Appellants

M. CARMEN & ASSOCIATES, PLLC
170 Old Country Road – Suite 400
Mineola, NY 11501
Phone: (516) 992-1848
Facsimile: (516) 739-0981
MEC:bg

Attachment

# Chemistry and Technology of Lubricants

## Second edition

Edited by

R.M. MORTIER
Technology Development Manager
Castrol International Technology Centre
UK

and

S.T. ORSZULIK
Autotype International Limited
UK

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presence of water in gasoline engine low-temperature stop-and-go operation accelerates the contaminant drop-out process. Dispersants are a vital component in gasoline engine oils and are also used to advantage in diesel engine oils to suspend harmful soot contaminants in order to provide longer engine life between overhauls. Diesel engine oil temperatures are generally sufficiently high enough to vaporize water from the oil.

Ashless dispersants are designed to have their polar chemical heads attached to rather large hydrocarbon groups. As shown in Figure 3.11 these polar heads interact with sludge. The hydrocarbon groups provide the solubilizing action which maintains the potentially harmful debris in suspension in the oil. By use of an engine oil well-fortified with a dispersant additive, as well as by practicing engine manufacturers' oil drain recommendations, virtually all of the harmful deposit-forming debris is removed from the engine when the oil is periodically drained.

There are four different types of ashless dispersants: (1) succinimides, (2) succinate esters, (3) Mannich types, and (4) phosphorus types. As with detergents, dispersants are used in a variety of automotive and industrial oils, whilst combinations of dispersant types are often used in lubricant formulations. This discussion will emphasize dispersant use in engine oils.

Most dispersants currently in use are prepared from polyisobutylenes of 1000 to 10 000 molecular weight. Their polar functionality arises from amino and/or hydroxyl (alcohol) groups. The connecting groups, in most cases, are either phenols or succinic acids. The products with succinic acid groups are called alkenyl succinimides and succinate esters. The products from phenols are alkyl hydroxybenzyl polyamines (also called Mannich dispersants because of the name of the German chemist who discovered the method of preparation). These materials are generally processed as 40 to 60% concentrates in base oil.

Both the succinimides and the succinate esters are derived from the same chemical intermediate. The preparation of this intermediate is shown in Figure 3.12. Polyisobutylene is reacted with maleic anhydride to form polyisobutenyl succinic anhydride. This material is often referred to as 'PIBSA'. In the formation of succinimides, the PIBSA is reacted with a polyamine to form a structurally complex mixture which can contain imide, amide, imidazoline, diamide, and amine salt.

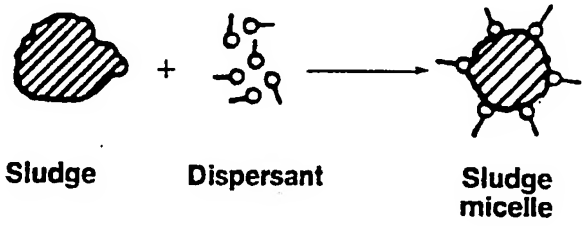


Figure 3.11 Sludge dispersion.